ri 

Test Plan on

Data for Road Incident Visualization, Evaluation & Reporting [DRIVER]

Prepared By:

Rushmia Ahmed

ID: 30098





**Version History** 

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version** | **Date** | **Change** | **Author** | **Reviewed by** |
| 1.0.0 | 2023-09-20 | Test Plan ,Test scope,Test activities on all features | Rushmia | Abdul Quadir |
| 1.0.1 | 2023-09-22 | Modified Test Environment | Rushmia | Abdul Quadir |

**Abbreviation List** 

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Term** | **Abbreviation** | | | |
| DRIVER | Data for Road Incident Visualization, Evaluation, & Reporting | | | |
| RCF | Road Crash Form. Special Entry screen to input brief information. | | | |
| ARF | Accident Report Form | | | |
| GUI | Graphical User Interface | | | |
| UI | User Interface | | | |
| UX | User Experience | | | |
| QA | Quality Assurance | | | |

**Table of contents**



[1. Introduction 4](#_heading=h.gjdgxs)

[2. Reference 4](#_heading=h.30j0zll)

[3.High Level Test Objective](#_heading=h.3znysh7) 4

4.Scopes for testing

5. Test [Strategy](#_heading=h.tyjcwt) [5](#_heading=h.4d34og8)

6[. Features to be Tested based on phases 6](#_heading=h.1t3h5sf)

[7.Types of testing will be performed for the scoped item](#_heading=h.2s8eyo1)s 8

[8.Types of testing will not be performed for scoped items](#_heading=h.eaysooo7mrqz) 8

9.Test Estimation [9](#_heading=h.3rdcrjn)

10[. Release Procedure 9](#_heading=h.26in1rg)

11[. Test Suspension Criteria 10](#_heading=h.lnxbz9)

[12. Test Acceptance Criteria: 10](#_heading=h.35nkun2)

[13. QA Task List and Testing Process 10](#_heading=h.1ksv4uv)

[14. Test Environment 11](#_heading=h.44sinio)

[Hardware Requirement: 11](#_heading=h.2jxsxqh)

[Software Requirement: 11](#_heading=h.z337ya)

[Network Requirement: 11](#_heading=h.3j2qqm3)

[Tools to be used: 11](#_heading=h.1y810tw)

[15. Schedule 11](#_heading=h.4i7ojhp)

[16. QA Summary Report 15](#_heading=h.2xcytpi)

[17. Roles and Responsibilities 17](#_heading=h.1ci93xb)

[18. Risk and](#_heading=h.3whwml4) Mitigation

19.Test Entry Criteria [17](#_heading=h.3whwml4)

20[. Test Exit Criteria 18](#_heading=h.2bn6wsx)

21[. Bug Status Explanation 18](#_heading=h.qsh70q)

22[. Test Deliverables 19](#_heading=h.3as4poj)

[23. Test Plan Approvals 19](#_heading=h.1pxezwc)

# 1.Introduction



The project aims to develop a data management system that will optimize the process of collecting, analyzing, managing, and reporting road crash incidents

In Dhaka city, daily accidents underscore a critical safety concern. The Dhaka Metropolitan Police (DMP) plays a vital role as a significant stakeholder, actively involved in road crash data collection, analysis, and management. This project's central focus is the efficient deployment and configuration of DRIVER software, an open-source web-based platform. It aims to enhance data collection, analysis, management, and reporting of road crash incidents, aligning with the DMP's specific needs and requirements to significantly improve road safety in the city

This Test plan outlines the process of testing the functionality of **Driver** web based Data Management system. The main purpose of this document is to ensure the overall Quality assurance plan, Test Procedure, Test schedule, Test acceptance criteria, Test Reporting etc.

# 2.Reference



The following documents are used as sources of information for this test plan:

| **Ref. No** | **Document Title** |
| --- | --- |
| 1.0 | Technical Proposal of Driver driver website  <https://docs.google.com/document/d/14uX9qRxq9oYv_vrwvGi7ht8N0U9yFzSgW61XHW8chBM/edit> |
| 2.0 | User Manual of Driver Website  <https://docs.google.com/document/d/1Irw20Pflx9IiwkFOFr9AudmZpLZZEeKxlkfSM8MO5Ow/edit> |
| 3.0 | RFP of Driver Website  <https://docs.google.com/document/d/1qp5C3OmVcnaIQeJBGWnYeufJn65FRVlHcNdFyljcNlo/edit> |
| 4.0 | Module List  <https://docs.google.com/spreadsheets/d/1XpgyEFLegTiwn_t3dQpVFi_tc8j20So-/edit?usp=drive_web&ouid=103407182519251372176&rtpof=true> |
| 5.0 | Test Estimation  <https://docs.google.com/spreadsheets/d/1Ahg3iO0NHaWjrLaZthK8AHmnviOAdCor/edit?usp=drive_web&ouid=103407182519251372176&rtpof=true> |

# 

# 3.High Level Test Objective



Our high-level goals are to check this product for feature improvement, feature implementation, issue fixing, and further maintenance work. We define the following test objectives:

| **Objective** | **Description** |
| --- | --- |
| Verify functionality | Ensure that the application's features meet the defined requirements and expectations. |
| Confirm predefined specifications | Validate that the product meets the predefined specifications and requirements accurately |
| Proactively identify defects | Perform comprehensive testing to promptly identify and address defects, ensuring an error-free user experience |
| Build customer trust | Aim to provide customers with a reliable and satisfying product experience by focusing on high quality |
| Ensure quality | Building trust and furnishing details regarding the standard of quality |

# 4.Scopes for Testing



**1)Module Name**:Login

**2)Module Name:** Dashboard

**Sub-Module Name**:

* Zoom in & Zoom out icon
* An icon to select streets & satellite
* Analyze & Filter
* View all incidents
* Loss amount
* Detail Loss amount
* 30 days
* 90 days
* 365 days
* Day Name
* Time
* Event count mark
* Filter Name
* Event Count mark
* Filter Name
* Description
* View

**3)Module name:** My Account

4**)Module Name:** Manage Duplicate Records

**5)Module Name:** Map

**Sub-Module Name**:

* Saved Filters
* Clear FiltersZoom to
* Add a record
* Radio
* Checkboxes
* Graphs
* Export > Custom Report
* Export > Export CSV
* Traffic Enforcement Assignments
* Pop-up Review

**6)Module Name:** Record List

**Sub-Module Name**:

* Occurred Date > From date
* Occurred Date > To date
* Weather
* SURFACE TYPE / রাস্তার প্রকারভেদ
* COLLISION TYPE / সংঘর্ষের ধরন আঘাত
* ACCIDENT SEVERITY / দুর্ঘটনার মাত্রা
* JUNCTION TYPE / সংযোগ স্থলের ধরণ
* CONTRIBUTORY FACTOR / সহায়ক কারণ
* DRIVER SEX / চালকের লিঙ্গ
* PASSENGER SEX / যাত্রীর লিঙ্গ
* Saved Filters
* Clear Filters
* Add a record
* View
* Edit

**7) Module Name**: Add a Record

**Sub-Module Name**:

* Location field
* Location map
* Latitude (Mandatory field)
* Longitude (Mandatory field)
* Occurred (Mandatory field)
* Weather dropdown
* Light
* ARF (Accident Report Form)
* ARF (Accident Report Form) > VEHICLES / যানবাহনগুলি
* VEHICLES / যানবাহনগুলি> VEHICLE / যানবাহন 1
* PASSENGER / যাত্রীদের বিবরণ
* PASSENGER / যাত্রীদের বিবরণ > PASSENGER / যাত্রীর বিবরণ 1
* PEDESTRIAN / পথচারীদের বিবরণ
* PEDESTRIAN / পথচারীদের বিবরণ > PEDESTRIAN / পথচারীর বিবরণ 1
* CONTRIBUTORY FACTOR / সহায়ক কারণ

From our understanding, we believe above functional areas need to be Tested.

# 5.Test Strategy



## Strategy

To ensure the quality of the applications of **Driver** project, testing will be conducted based on following approaches:

**Step-1:UI/UX Testing Strategies:**

* Conducted as the first testing phase upon receiving the application by the QA team.
* Primarily focuses on validating the application's UI against client requirements

**step-2: Functional Testing Strategies:**

Creation of Test Scenarios and Test Cases for the different features

• We will apply several Test Designing techniques while creating Test Cases

o Equivalence Class Partition

o Boundary Value Analysis

o Decision Table Testing

• We also use our expertise in creating Test Cases by applying the below:

o Error Guessing

o Exploratory Testing

• We prioritize the Test Cases

**step-3:Integration Testing Strategy**

* Integrate components within the Driver scope
* Check interfaces and interactions between integrated components

**step-4:System Testing Strategy**

* Check the system's full end-to-end functionality to make sure it complies with the specifications and user expectations.

**step-5:Usability Testing Strategy**

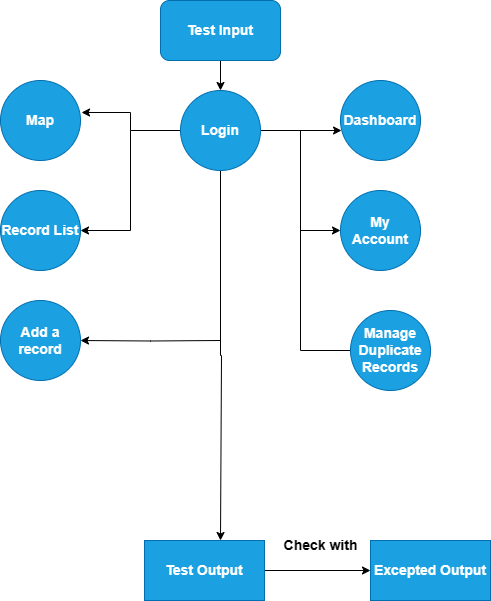
* Analyze how user-friendly the **Driver** website's UI is.
* Evaluate the ease of navigation, layout, and overall user experience.
* Make sure the driver website allows for intuitive user interaction.

**Note**:We will follow the below best practices to make our Testing better:

**1. Smoke Testing**:we will perform Smoke Testing to check whether the different and important functionalities of the application are working.

2 **Context Driven Testing** – We will be performing Testing as per the context of the given application.

3. **Exploratory Testing** – Using our expertise we will perform Exploratory Testing, apart from the normal execution of the Test cases.



# 6.Features to be Tested based on Phases



| **Phase** | **Sprint** | **Features/Modules** |
| --- | --- | --- |
| 01 | 01 | Complete UI/UX for Dashboard, Login Page  Login mechanism  Dashboard mechanism  My Account Mechanism  Manage Duplicate Records Mechanism  Map mechanism  Record List,Add a record mechanism |
| **Note:**  Test plan and execution may vary depending on the development progress and release. | | |

## 

# 8.Types of testing will not be performed for scoped items



**UI/UX Testing :**

* Conducted as the first testing phase upon receiving the application by the QA team.
* Primarily focuses on validating the application's UI against client requirements

**GUI Test:**

* This testing will cover the application's graphical user interface, to ensure flawless implementation based on UI specification. GUI testing intent to test how the application and the user interact. This includes how the application handles user input and how it displays screen text, images, buttons, menus, dialog boxes, icons, tool bars and more.

**Functional testing**:

* To ensure the application's features meet client needs, functional testing is employed. "**Smoke Testing**" swiftly verifies crucial features, "**Context Driven Testing**" adapts our approach to the application's context, and "**Exploratory Testing**" helps uncover inconsistencies, ensuring client satisfaction

**Integration Testing:**

* Verify that the data and control flow between integrated components is accurate and behaves as expected when combined according to the needs of the client.

**System Testing:**

* Ensure that the software system satisfies the required functional specifications and correctly carries out all intended functions.

**Usability Testing:**

* Ensure that the product is user-friendly, intuitive, and fulfills the requirements and expectations of its client

**8.Types of testing will not be performed for the scoped**

**items**

| **Testing Types** | **Here are the reasons for not conducting that testing at this time** |
| --- | --- |
| **Performance Testing** | Before moving on to performance testing, the current phase primarily concentrates on functional testing to make sure that the fundamental features and functionalities are functioning as intended. |
| **Retesting** | To optimize testing efforts and manage time effectively, retesting is scheduled for the next phase, allowing for a consolidated validation of all changes made during multiple phases |
| **Regression Testing** | Due to the limited time or resources available during this phase, conducting extensive regression testing may not be possible. |
| **Security Testing** | The current focus of resources is on feature development, testing, and bug fixing. Spending money on vast security testing could temporarily hinder these vital development projects. |
| **Compatibility Testing** | At the current project phase, the primary focus is on developing and testing core functionalities and features.At a later stage, comprehensive compatibility testing is anticipated. |
| **Management & Maintenance** | TBD (Need client decision) |

# 9.Test Estimation

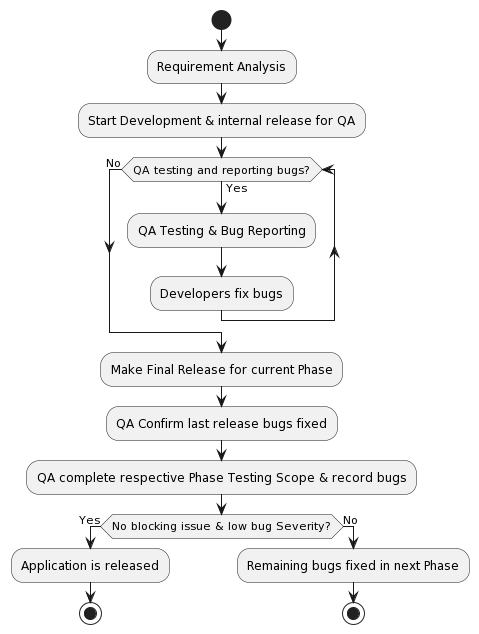


Testing effort may depend on several factors including-

* Test quality and approach
* Size of the product
* Complexity of the problem domain
* Requirements for documentation
* Time pressure
* Number of defects and the amount of rework required.

# 10.Release Procedure





# 11.Test Suspension Criteria



Testing will be suspended, and QA team will reject the receivables upon the following criteria:

* Unavailability of external dependent systems during execution.
* When a defect is introduced that cannot allow any further testing.
* Critical path deadline is missed so that the client will not accept delivery even if all testing is completed.
* A specific holiday shuts down both development and testing.
* Respective bug is not fixed in dedicated release
* Release without release note

**Note:** If any case will happen then QA have to raise issue to respective stakeholders

# 12.Test Acceptance Criteria:



* The user interface (UI) of the application must perfectly match the client's specifications.
* There shouldn't be any serious blocking issues with the application that limit its functionality.
* For thorough testing, the test suite must achieve a minimum test case coverage of 85%.
* Application have covered supported required browser (Windows Chrome).

# 13.QA Task List and Testing Process



Below Tasks will be performed by the QA Team:

**1.Requirement analysis**:Examine the project requirements thoroughly to understand the functionalities and features of the application

**2.Identify Test areas**:Identify the specific modules or functionalities that require testing in accordance with the given requirements.

**3.Test Case writing on identified test area**s:Create detailed test cases for each identified test area, including preconditions, steps, expected results.

**4.Prepare Test environment**:Establish the essential testing environment, including software, hardware, network setups, and any other vital components

**5.Execute Test Cases**:Implement the prepared test cases in the chosen testing environment and recording the outcomes

**6.Bug reporting**:Report any bugs that were found during testing, giving thorough details on what went wrong. After resolution, retest to confirm the fix.

**7.Deliver Test report**:Create a thorough test report that includes a summary of the testing procedures, results, any issues found, and a quality rating for the application.

**8.Perform Test closure activity**:Complete necessary documentation and formalities to conclude the testing phase

**9.Daily morning meeting**:To keep everyone informed and in consistency, hold a morning meeting each day to discuss the day's goals, challenges, and progress.

**10.Spec grooming meeting**:To review, elucidate, and improve the requirements and specifications, hold a specification grooming meeting to ensure accurate interpretation and a common understanding.

# 14.Test Environment



To prepare the test bed for **Driver** project followings are the requirement:

## Hardware Requirement:

* PC (Widows)

## Software Requirement:

* **Operating System**: Windows 10
* **Microsoft Office**

## Network Requirement:

* + - Internet connectivity to Laptop.

## Tools to be used:

* + - **Test Case management**: Microsoft Excel/Google Drive
    - **Document management**:Google Drive
    - **Project management**: Redmine

Device oriented testing will be conducted as per following plan:

| Platform | Browser/OS | Device | Details |
| --- | --- | --- | --- |
| Windows 10 | Chrome  version:116.0.5845.188 | pc | Screen Resolution:1440 x1100 |

# 15.Schedule



Schedule will be updated as Phase feature release:

| **Phase** | **Feature Name** | **Req. Analysis** | **No of Test**  **Items** | **Test Case**  **Design** | **Internal QA Release** | **Final Release** |
| --- | --- | --- | --- | --- | --- | --- |
| 2 | * Complete UI/UX on Dashboard * Login Page * My Account * Manage Duplicate Records * Map mechanism * Record list mechanism * Add a record mechanism |  | 7 | 230 | 2023-09-25 | 2023-09-29 |

# 

# 16.QA Summary Report



| **Phase** | **URL** |
| --- | --- |
| 1st Release (0.1.0) | <https://docs.google.com/document/d/1wIG1QOyNXAqumgDkl752sIACZZHC88tA/edit?usp=drive_web&ouid=103407182519251372176&rtpof=true> |

# 17.Roles and Responsibilities



| **Name** | **Roles** | **Roles and Responsibilities** |
| --- | --- | --- |
|  | General Manager | * Define the long-term vision and strategic direction of BJIT in alignment with its overall business objectives and market trends |
|  | Project Manager | * Define the project's goals, deliverables, and scope in cooperation with the stakeholders. |
|  | Software Architect | * Design and define the overall architecture of the software system,ensuring alignment with business requirements and scalability needs. |
|  | Software Engineer | * Write, test, and maintain code for software applications based on specifications and requirements. |
|  |
|  |
| Rushmia Ahmed | QA | * Create a complete test plan that details the strategy, resources, and schedule for testing activities. * To verify the functionality and behavior of the application, create thorough test cases based on the requirements and specifications for the software. |

# 18.Risk and Mitigations



| **Risks** | **Mitigations** |
| --- | --- |
| If SRS are not Cleared as per schedule, then we may not be able to meet the Testing deadline. | * Ensure frequent communication with the stakeholders responsible for SRS clearance * Create prototypes or mockups to provide a visual representation of the application to stakeholders. |
| If Releases for Testing are not provided as per schedule, then we may not be able to meet the deadline. | Re-evaluate the testing priorities and focus on critical and high-risk areas first |
| Any changes to the requirements/scope could affect the test schedule. | Any requirement changes must go through formal approval and documentation procedures. |
| Application may also not work expectedly in latest browsers for which application is not modified and tested. | Focus on testing the application on major browsers that are widely used by the target audience. |
| Applications may have side effects due to implementation of new features and function enhancement and this may affect the functionality of existing features due to lack of proper testing time. | Prioritize regression testing to ensure that new features and enhancements do not adversely impact existing functionality. |

# 19.Test Entry Criteria



The requirements that must be satisfied before testing operations may start are specified by the test entry criteria. These standards guarantee that the application and testing environment are prepared for testing:● Complete or partially testable code is available:

● Requirements are defined and approved.

● The test plan, detailing the testing strategy, scope, objectives, and resources, should be

approved.

● Test cases are developed and ready.

● Test environment has been set-up and all other necessary resources such as tools and

devices are available.

# 20.Test Exit Criteria



Testing process of the **Driver** application will be ended if following criteria are met:

1. Deadlines meet
2. Execution and updating of all test cases.
3. Desired and sufficient coverage of the requirements and functionalities under the test.
4. All the identified defects are corrected and closed
5. No high priority or severity or critical bug has been left out.
6. Maintaining defects with their current status.
7. Testing is ongoing but the PM requested to release the system.

# 21.Bug Status Explanation



We maintain following status of the **Bug** in our **Test Execution** report:

**New:** When any defect or bug is found and validated, the status of bug or defect is logged in as To-do.

**In-Progress:** When assigned developer working on the respective ticket.

**Done:** This status means that the issue is fixed, Now tested can retest.

**Verified:** The tester re-tests the bug after it got fixed by the developer. If there is no bug detected in the software, then the bug is fixed, and the status assigned is "verified."

**Reopened:** If the bug persists even after the developer has fixed the bug, the tester changes the status to "reopened". Once again, the bug goes through the life cycle.

**Closed:** If the bug is no longer exists then the tester assigns the status "Closed."

**Duplicate:** If the defect is repeated twice or the defect corresponds to the same concept of the bug, the status is changed to "duplicate."

**Rejected:** If the developer feels the defect is not a genuine defect then it changes the defect to "rejected."

**Deferred:** If the present bug is not of a prime priority and if it is expected to get fixed in the next release, then status "Deferred" is assigned to such bugs

**Not a bug:** If it does not affect the functionality of the application then the status assigned to a bug is "Not a bug".

# 22.Test Deliverables



Followings are the deliverables from QA for **Driver** project:

| **Deliverables** | **Description** |
| --- | --- |
| Test Plan | Details on the scope of the Project, test  strategy, test schedule, resource  requirements, test deliverables and  schedule |
| Test Cases | Test Cases created for the scope defined |
| Defect Reports | Detailed description of the defects  identified along with screenshots and  steps to reproduce on a daily basis. |
| Summary  Reports | Summary Reports –  Bugs by Bug#,  Bugs by Functional Area and  Bugs by Priority |

*Note: Known issues are needs to well mentioned in each Phase release note.*

# 23.Test Plan Approvals



# 

| **Name** | **Role** | **Signature** | **Date** |
| --- | --- | --- | --- |
| Abdul Qadir | Project Manager |  | 2023-09-19 |
| Abdul Qadir | Project Manager |  | 2023-09-22 |